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## The Viability of Stimulating Technology-Oriented Entrepreneurial Activity in China, Taiwan, Japan, and South Korea: How Regulations and Culture Encourage the Creation, Development and Exploitation of Intellectual Property

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# THE VIABILITY OF STIMULATING TECHNOLOGY-ORIENTED ENTREPRENEURIAL ACTIVITY IN CHINA, TAIWAN, JAPAN, AND SOUTH KOREA: HOW REGULATIONS AND CULTURE ENCOURAGE THE CREATION, DEVELOPMENT, AND EXPLOITATION OF INTELLECTUAL PROPERTY

*Matthew L. Goldberg\**

## I. INTRODUCTION

With the ever-expanding global capitalistic economy, technology and information access are quickly becoming arenas where countries seek development to remain competitive. Inherent in the development of technology is entrepreneurship—the ability to create and develop new ideas. This paper compares the ability of the laws and cultures of select East Asian countries to encourage and facilitate technology-oriented entrepreneurship. The countries evaluated are: (1) China, a nation with tremendous economic potential; (2) Taiwan, whose capitalistic mentality and capacity to influence investment and technological know-how in China make them worthy of analysis; (3) Japan, a nation with a large economy and a proven ability to create highly reputable technology products; and (4) South Korea, which due to its advanced Internet infrastructure is a tremendous testing ground for technological advances.

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The goal of this paper is to provide investors, advisors, and legal practitioners with a framework to better evaluate and compare these nations for potential investment ventures. Each country is separately evaluated under a three-part analysis using criteria based on what venture capitalists deem most important when evaluating a possible portfolio company. This includes areas of analysis such as whether the company owns or has exclusive rights to its intellectual property, whether the company can protect and profit from this ownership, whether the company's management has the entrepreneurial tools to move the company forward, and whether investors can sell their interest and withdraw a return from their investment.<sup>1</sup>

Consequently, Part I describes each country's foundation for patent and software copyright laws and explains how these laws facilitate or inhibit the creation of intellectual property in each nation. Part I also discusses each country's ability to enforce these laws. Part II reviews the nature and viability of exit opportunities for investors in each nation.<sup>2</sup> Finally, Part III discusses the culture and logistics of each nation to determine if a proper environment exists for technological entrepreneurship. Where applicable, laws that encourage entrepreneurial funding and activity have been integrated into the evaluation.

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<sup>1</sup> See generally Curtis J. Milhaupt, *The Market for Innovation in the United States and Japan: Venture Capital and the Comparative Corporate Governance Debate*, 91 NW. U. L. REV. 865, 880 (1997) (listing the five key components to a successful venture capital environment as: liquidity, incentives, labor mobility, risk tolerance, and a detachment of venture capital funds from the special interests of government, banks, or institutional investors).

<sup>2</sup> "Exit opportunities" are ways for investors to obtain a financial return for their investment or obtain "liquidity" for their investment. The most common exit opportunities for start-up ventures include initial public offerings of stock, a company's acquisition by another company (a merger), or the sale of the investor's stock ownership to another investor.

## II. THE PEOPLE'S REPUBLIC OF CHINA

China attracts large-scale attention for its potential market size, cheap labor, and technical skills. However, China still lacks several important conditions for developing entrepreneurial ventures. China's problems include, inter alia, access to capital, efficient managerial structures, and marketing and financial skills.<sup>3</sup> Moreover, China's state run economy creates policies that favor its state-run enterprises.<sup>4</sup> China has great commercial and investor potential, but there are many potholes along the way, some of which can be avoided with proper planning, and others that cannot.

*A. China's Intellectual Property Laws*

With attention in recent years towards fostering foreign investment and the corresponding need to protect this investment in intellectual property, China has patterned its current intellectual property laws on international treaties and standards.<sup>5</sup> China's recent entry into the World Trade Organization (WTO) in

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<sup>3</sup> See Francis Bassolino, *China: Private Equity - Nothing Ventured*, CHINA ECON. REV., Jan. 14, 2003, at 1. It is also worth noting that China is a civil law state, meaning case law and prior court decisions, while somewhat relevant, are not binding; the rule as stated is what judges or bureaucrats will follow. However, these rules are broad enough to allow bureaucrats to apply their particular policy to each situation. See *infra* note 44.

<sup>4</sup> See, e.g., *id.* (discussing how the government limits the supply of equity offerings by allowing state-owned enterprises to list first); Karby Leggett, *China to Launch Stock Markets for Tech Firms*, ASIAN WALL ST. J., Mar. 10, 2000, at 13 (discussing how equity listing candidates are chosen more for their political backing than for the quality of their operations); Cynthia L. Webb, *Tech Firms Keep Riding Chinese Tiger*, WASHINGTONPOST.COM, Nov. 30, 2004, <http://www.washingtonpost.com/ac2/wp-dyn/A21577-2004Nov30?language=printer> (last visited Mar. 1, 2005) (stating how Beijing's government procurement office canceled a \$3.5 million software deal with Microsoft just ten days after it was awarded, following official complaints that local governments are not buying enough software developed domestically).

<sup>5</sup> See Jonathan C. Spierer, *Intellectual Property in China: Prospectus for New Market Entrants*, HARV. ASIA Q., Summer 1999, available at <http://www.fas.harvard.edu/~asiactr/haq/199903/9903a010.htm> (last visited Mar. 1, 2005). China's copyright law was developed in 1990 with assistance from the World Intellectual Property Organization, legal experts, and business consultants.

2003 resulted in the revision or repeal of laws that were not in line with its WTO agreements and obligations. China's membership in the WTO required Chinese law to become more transparent and consistent with international practices, and required China to better enforce and protect intellectual property rights.<sup>6</sup>

### *1. China's patent law and the compulsory license*

China, along with Japan, South Korea, and the United States, are all members of the World Intellectual Property Organization (WIPO) Patent Cooperation Treaty (PCT), which provides an international system for filing and processing international patent applications.<sup>7</sup> Foreigners are given the same rights as Chinese citizens for patent and copyright laws, so long as the foreigner's native country or nation of residence has entered a treaty with China or, for a copyright, the material was first published in such a country.<sup>8</sup> Patent law may also

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<sup>6</sup> STATE INTELLECTUAL PROPERTY OFFICE, REPORT ON THE PROTECTION OF INTELLECTUAL PROPERTY RIGHTS IN CHINA IN 2003 (ABSTRACT) (2004), at [http://www.sipo.gov.cn/sipo\\_English/new\\_041402.htm](http://www.sipo.gov.cn/sipo_English/new_041402.htm) (last visited Mar. 1, 2005) [hereinafter CHINA 2003 IP REPORT]; see generally *infra* note 15.

<sup>7</sup> The Convention establishing the World Intellectual Property Organization was signed in Stockholm on July 14, 1967, and entered into force in 1970. WIPO is responsible for the promotion of the protection of intellectual property throughout the world through cooperation among states, and for the administration of various multilateral treaties dealing with the legal and administrative aspects of intellectual property. There are over 179 members of the WIPO. See *A Brief Summary of the WIPO Treaties*, APLF UPDATE (Assoc. of Patent L. Firms, Chi., Ill.), Jan. 27, 2003, Issue 46, at <http://www.aplf.org/mailler/issue46.html> (last visited Feb. 22, 2005). There are a total of 124 members of the Patent Cooperation Treaty, including South Korea, Japan, and the United States. The PCT makes it possible to seek patent protection for an invention simultaneously in each of a large number of countries by filing an "international" patent application. Such an application may be filed by anyone who is a national or resident of a contracting state. The Treaty regulates the formal requirements with which any international application must comply. Patent Cooperation Treaty, June 19, 1970, 28 U.S.T. 7645, available at <http://www.wipo.int/pet/en/texts/pdf/pct.pdf> (last visited Mar. 1, 2005).

<sup>8</sup> Copyright Law of the People's Republic of China, art. 2, available at [http://www.sipo.gov.cn/sipo\\_English/flfg/xgflfg/t20020416\\_34754.htm](http://www.sipo.gov.cn/sipo_English/flfg/xgflfg/t20020416_34754.htm) (last visited Mar. 3, 2005) [hereinafter China Copyright].

apply on the principle of reciprocity, meaning that if one country allows Chinese citizens or businesses to receive protection under that nation's patent laws, China will act in kind.<sup>9</sup>

A patent granted in China gives the holder exclusive rights to exploit their invention for twenty years.<sup>10</sup> Patents are granted to the applicant whose application was filed first,<sup>11</sup> and annual fees are required to maintain the patent.<sup>12</sup> These rights are similar to those granted by other nations such as Japan, Taiwan, South Korea, and the United States, which all grant twenty year patents. In addition, all countries use the first-in-time application standard, with the exception of the United States and the Philippines, who use the "first to invent" standard.<sup>13</sup> China's patent laws were also enacted for reasons similar to most countries—to encourage the development, dispersion, and application of inventions, and to promote science and technology.<sup>14</sup> However, unlike the other nations discussed in this article, Chinese law also preserves the goal of meeting the needs of socialist modernization.<sup>15</sup>

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<sup>9</sup> Patent Law of the People's Republic of China, art. 18, available at [http://www.sipo.gov.cn/sipo...English/flfg/zlflfg/t20020327\\_33872.htm](http://www.sipo.gov.cn/sipo...English/flfg/zlflfg/t20020327_33872.htm) (last visited Mar. 3, 2005) [hereinafter *China Patent*].

<sup>10</sup> *Id.* art. 42. Patents for utility models and designs are ten years. *Id.*

<sup>11</sup> *Id.* art. 9.

<sup>12</sup> *Id.* art. 43.

<sup>13</sup> KENNETH L. PORT & GERALD PAUL MCALINN, *COMPARATIVE LAW: LAW AND THE LEGAL PROCESS IN JAPAN* 734 (Carolina Academic Press 2003) (1996).

<sup>14</sup> *China Patent*, *supra* note 9, art. 1. China also fosters patent licensing by removing the right of a licensee to sublicense, unless agreed to by contract with the licensor. *Id.* art. 12.

<sup>15</sup> *Id.* art. 1; see generally Phelim Kyne, *China Overturns Pfizer's Patent for Viagra Drug: Ruling Intensifies Concerns Over Beijing's Commitment to Intellectual Property*, *ASIAN WALL ST. J.*, July 8, 2004, at A1 (discussing how China's actions denying Pfizer's patent for Viagra reveal China's conflicting signals about its commitment to improve its intellectual property rights) [hereinafter *Pfizer Patent*].

The need to protect the socialist system is a standard that creates some uncertainty for patent holders. No patent right will be granted for any invention that is against social morality, detrimental to the public interest, or contrary to the laws of the State.<sup>16</sup> Moreover, the State can require compulsory patent licenses. While compulsory license laws are not uncommon, their interpretation and application can limit a patent holder's ability to fully determine the patent's commercial exploitation.

For example, the Patent Administration Department under the State Council may grant a compulsory license for a company or government entity to exploit a patent even when that company or agency has been unable to agree with the patent holder on a reasonable fee.<sup>17</sup> A compulsory license may also be granted when a national emergency or "extraordinary" state of affairs occurs, or "where the public interest so requires."<sup>18</sup> The State can also mandate how a patent "which is of great significance to the interest of the State or to the public interest and is

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<sup>16</sup> China Patent, *supra* note 9, art. 5. The concept of public interest may also explain why foreign companies have had such a difficult time receiving patents in health-related industries. See, e.g., Phelim Kyne & Leslie Chang, *Glaxo Gives Up Patent, Avoiding Fight in China*, ASIAN WALL ST. J., Aug. 19, 2004, at A1 (discussing how pharmaceutical companies believe enforcement of patents in China is "spotty" and that the approval process is extremely slow, thereby delaying their opportunity to utilize patent laws).

<sup>17</sup> China Patent, *supra* note 9, arts. 48, 54. This decision can be appealed to the Patent Administration Department under the State Council. *Id.* art. 55.

<sup>18</sup> *Id.* art. 49. A recent example of this involved AIDS drugs. In 2002, China considered allowing the domestic production of generic AIDS drugs, even though they would violate foreign patents (India and Brazil had already issued similar compulsory licenses). China, however, stated it would first negotiate in good faith with drug producers before taking the drastic and potentially inflammatory step of a compulsory license. This indicates how countries will resist having to use this right, but how the ability of companies in areas related to public health and similar industries may not be able to fully exercise the monopoly rights they have for their patented drugs. See generally Leslie Chang, *China Warns of Action on AIDS Medicines; If Price Talks Fail, Beijing May Permit Local Firms to Produce Patented Drugs*, ASIAN WALL ST. J., Sept. 9, 2002, at A3; *China to Comply with Patents on AIDS Drugs, Official Says*, ASIAN WALL ST. J., Sept. 10, 2002, at A3.

in need of spreading and application” can be applied.<sup>19</sup> A compulsory license can also be required when an important technical advancement of considerable economic significance calls for the use of a certain patent.<sup>20</sup>

These vague and ambiguous statements illustrate that any patent can be violated at the will of the State. Moreover, Chinese law does not consider it patent infringement if the patent is used for purposes such as general scientific research and experimentation, or if the patented product was being used prior to its filing as a patent.<sup>21</sup> The former is a rather broad carve-out, while the latter creates concerns for the patentee who uses the invention or similar ones in his or her business prior to the patent being filed.

For an invention created by an inventor while employed (defined as an invention made during employment or using the material and technical means of the employer), the right to apply for the patent belongs to the entity employing the inventor; after approval, the entity is considered the patentee.<sup>22</sup> The scenario becomes more complicated when attempting to assign a patent to a foreigner (seemingly including a foreign-owned entrepreneurial venture), as any assignment to a foreigner must be approved by the State.<sup>23</sup> However, no criteria for such approvals are listed in the law.

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<sup>19</sup> China Patent, *supra* note 9, art. 14.

<sup>20</sup> *Id.* art. 50.

<sup>21</sup> *Id.* art. 63; see generally *Pfizer Patent*, *supra* note 15 (Pfizer was denied a patent in China for Viagra because it was deemed to have failed the “novelty” requirement). Under the novelty requirement, “a patent can be granted and upheld only if no identical invention has been disclosed in any publication within the country or abroad, or been publicly used or made known to the public by any other means within the country.” *Id.*

<sup>22</sup> China Patent, *supra* note 9, art. 6. By example, in the U.S. the employee/inventor applies for the patent and then through contract assigns the right to the company.

<sup>23</sup> China Patent, *supra* note 9, art. 10.



## 2. China's software protection

Like the laws of the United States, China's copyright laws specifically protect computer software.<sup>24</sup> China defines software as "the computer and supporting files" and excludes concepts and algorithms that lead to the development of code.<sup>25</sup> The term of protection for China's copyright is fifty years.<sup>26</sup> The copyright owner has standard rights such as the right to alteration, integrity, distribution, and adaptation, as well as the right to authorize others to exercise these rights (through licenses) and to receive remuneration for such licenses.<sup>27</sup> However, there are a number of ambiguous areas which may cause problems. One area of concern applies to material created for an employer. Unless otherwise agreed to in contract, a work commissioned by an employer is assumed to be owned by the employer.<sup>28</sup> However, while a work created by an employee in the fulfillment of tasks assigned to him by an employer is deemed to be a work created in the course of employment, the copyright in the work still belongs to the author/employee.<sup>29</sup> Nevertheless, the legal entity or organization is granted a priority right to exploit the work within the scope of its professional activities. The important practice point here is to include language in a proprietary rights agreement for employees or independent software contractors that broadly

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<sup>24</sup> China Copyright, *supra* note 8, art. 1.

<sup>25</sup> *Id.*

<sup>26</sup> *Id.* art. 21. Authors are given "rights of authorship, alteration and integrity" for eternity. *Id.* art.

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<sup>27</sup> *Id.* art. 10.

<sup>28</sup> *Id.* art. 6.

<sup>29</sup> *Id.* art. 16.

defines these professional activities and business areas. However, language that is too restrictive on the author's rights may violate China's socialist policies.<sup>30</sup>

Chinese copyrights are limited in other ways, as a work may be exploited without permission or payment for reasons such as the user's own private study, research, or personal entertainment; as well as be used by the State for the purpose of fulfilling its own official duties.<sup>31</sup> These reasons are rather ambiguous and cannot be protected or clarified through contract.<sup>32</sup> After all, private study, research, or personal entertainment would account for most consumer purchases; and "state official duties" could mean almost anything.

### 3. Enforcement of intellectual property laws

China's recent entry into the WTO has motivated China to make even more of an effort to increase its enforcement of intellectual property rights.<sup>33</sup> The efficacy of the enforcement to date is debatable.<sup>34</sup> On one hand, public awareness

<sup>30</sup> China's copyright laws incorporate ambiguous concepts such as the promotion of "the development and prosperity of the socialist culture and science." *Id.* art. 1.

<sup>31</sup> *Id.* § 4, art. 22 (additional limitations on use are listed in article 22).

<sup>32</sup> Another ambiguous area concerns works by co-authors. For works created by two or more authors, the copyright is "enjoyed jointly" by the authors. *Id.* art. 13. It is unclear, however, whether approvals from all or just one is necessary to commercially exploit the material.

<sup>33</sup> China reported handling 1,517 patent dispute cases in 2003, and claimed 1,237 were resolved. China also reported 1,873 settled cases for "passing-off" patents and 164 settled cases for counterfeiting patents. CHINA 2003 IP REPORT, *supra* note 6. In 2003 China's Trademark Office received the most trademark applications ever -- 452,095 (7.5% were from abroad). *Id.* That same year, over 37,000 "trademark law-breaking cases were investigated," of which two-thirds were defined by China as "trademark-infringement and counterfeiting." *Id.* Of those, "45 cases were transferred to judicial organs for criminal liabilities." Given the high level of counterfeiting known to take place in the country, this number seems very low. *Id.*

<sup>34</sup> See, e.g., *infra* note 40. Moreover, since 2001 the United States has been monitoring China under section 306 of the Trade Act of 1974. This means that the United States Trade Representative can move directly to trade sanctions if there is slippage in either country's enforcement of bilateral intellectual property rights agreements. RALPH HAUGHWOUT FOLSOM ET AL., INTERNATIONAL BUSINESS TRANSACTIONS 869-70 (7th ed. West 2004) (2002) (*citing* USTR 2001 SPECIAL 301 REPORT (2002)).

of the use of intellectual property has clearly risen. In 2003, China saw a 22% increase in patent filings from the previous year, including a 61% increase of foreign applications and a 38% increase in granted patents.<sup>35</sup> There is also a corresponding new use of patent law by domestic Chinese companies to resolve intellectual property disputes. This indicates that domestic companies are not only applying for patents, but are also now seeking legal means to resolve intellectual property disputes rather than just simply infringing on rights.<sup>36</sup>

However, penalties for intellectual property infringement in China still appear vague and unimposing. Infringers could face any of the following repercussions: an order to cease the infringing act or eliminate the effects of the act, apologizing, or paying compensation for damages.<sup>37</sup> The level of compensation depends on the circumstances of each case.<sup>38</sup> In 2003, China reported that it dispatched 150,000 enforcement personnel to check more than 20,000 markets, 67,000 booths, 500 enterprises, and 800 schools. They reported 12,900,000 pieces/sets of pirated products seized, of which 2,542 received fines totaling over 2.8 million RMB (about U.S. \$400,000) and almost 2,000 illegal businesses were shut down.<sup>39</sup> Relative to the size of China and the country's current disregard for intellectual property laws, these numbers seem low, especially the number of

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<sup>35</sup> China's State Intellectual Property Office (SIPO) has granted over one million patents. Foreign applications represent 17.4% of the patent filings, but only 12% of the granted patents. China's SIPO granted 1,065,261 patents in 2003 from 1,595,415 filings. See CHINA 2003 IP REPORT, *supra* note 6.

<sup>36</sup> See Kyne & Chang, *supra* note 16 (discussing how the growing number of patent challenges being filed in China is a good sign that "the domestic industry is starting to use legal methods to challenge patents rather than just infringe them").

<sup>37</sup> China Copyright, *supra* note 8, art. 46.

<sup>38</sup> *Id.*

<sup>39</sup> *Id.*

cases brought to court and the amounts of the fines. These numbers either show a continued lack of concern for intellectual property violations in China or an inability to enforce these laws in such an expansive nation.<sup>40</sup>

### *B. Exit Opportunities: "Buyer Beware"*

Exit options can be rather difficult in China. China's capital controls preclude quick exits from investments.<sup>41</sup> Foreign investors in China also cannot repatriate funds from a domestic initial public offering.<sup>42</sup> In addition, corruption and lack of transparency are problems, since accounting regulations are in their infancy and Chinese securities laws are a jumbled mix of Western free-market tenets and principles of state control.<sup>43</sup> Moreover, China's policy of favoring state owned companies in their public stock market has not only made it difficult for non-state owned or supported companies to get listed, but has also created a

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<sup>40</sup> China has attempted to clean up IP violations in the country for over ten years, but not much progress has been made. See, e.g., *China Starts Center As Patent Watchdog*, ASIAN WALL ST. J., Sept. 23, 1994, at A4 (discussing how China started an intellectual property protection center in response to IP infringements with watchdog networks in 26 provinces); Charles Hutzler & Phelim Kyne, *U.S. Businesses Urge China to Rein in Piracy; American Companies Say Intellectual-Property Theft Remains a Serious Problem*, ASIAN WALL ST. J., Sept. 17, 2004, at A3 (noting that, "There is virtually no enforcement," says Charles Martin, director of the Beijing office for American Chamber of Commerce.); Webb, *supra* note 4 (citing Business Software Alliance's estimate that 92% of the software in China is pirated).

<sup>41</sup> Peter Wonacott, *Carlyle Group Packs Fat Wallet for Tour of China; U.S. Private-Equity Giant to Invest up to \$1 Billion; "A Golden Period for Us."* ASIAN WALL ST. J., Apr. 21, 2004, at A1 [hereinafter *Carlyle Group*]. The Carlyle Group has about \$18 billion in global funds and its advisors include former U.S. Secretary of State James Baker III, former SEC Chairman Arthur Levitt, and former British Prime Minister John Major. *Id.*

<sup>42</sup> *Id.* See also Rita Raagas De Ramos, *Funds: Venture-Capital Funds Favor China; Interest in Opportunities in Still-Liberalizing Economy Grew After Country Joined WTO*, ASIAN WALL ST. J., July 11, 2003, at M5 (describing procedures and ways around them).

<sup>43</sup> Peggy H. Fu, Comment, *Developing Venture Capital Laws in China: Lessons Learned from the United States, Germany, and Japan*, 23 LOY. L.A. INT'L. & COMP. L. REV. 487, 511-16, 520-21 (2001), citing Xian Chu Zhang, *The Old Problems, the New Law, and the Developing Market--A Preliminary Examination of the First Securities Law of the People's Republic Of China*, 33 INT'L. L. 983, 988, 1013 (1999).

public distrust in the market;<sup>44</sup> it is telling that even as the Chinese economy has surged in recent years, stock prices have still languished.<sup>45</sup> Furthermore, attempting to list a Chinese company in a foreign stock exchange encompasses its own set of obstacles. As a result of China's unclear foreign investment laws, several technology related Chinese companies—companies with foreign investment—have had their plans to list shares on overseas stock markets delayed as regulators debate these laws.<sup>46</sup>

Several alternatives exist to limit some of these problems. Foreign listing is still an option for exit, although this alternative may only be useful for the best companies.<sup>47</sup> China has also recently begun plans to set up a market for smaller companies similar to the NASDAQ.<sup>48</sup> Exit via a merger or acquisition is also an option, although an unpredictable one, as government ministries that oversee

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<sup>44</sup> This limits an investor's desire to purchase stocks offered in the public market. Richard Daniel Ewing, *China Needs Venture Capital*, ASIAN WALL ST. J., July 26, 2004, at A9. Chinese laws are also broadly drafted and leave room for interpretation by the bureaucrats. If the bureaucrats find a law or policy undesirable, they can make certain company registrations and operations difficult (such as unnecessary delays). See Anna M. Han, *China's Company Law: Practicing Capitalism in a Transitional Economy*, 5 PAC. RIM L. & POL'Y J. 457, 491–92 (1996). Having management with strong local connections can be very helpful in this regard.

<sup>45</sup> See Kathy Chen & Lora Western, *Beijing Plans to Start New Trading Board; Nation's Version of NASDAQ Will Help Smaller Firms; Market Overhaul is Critical*, ASIAN WALL ST. J., Mar. 31, 2004, at A1 (stating that Chinese companies are "plagued by shareprice manipulation, lack of transparency, and scandal" and therefore "potential investors have stayed away"); *Heard in Asia: Beijing Has Begun to Spotlight its Vulnerable Brokerage Firms*, ASIAN WALL ST. J., Sept. 22, 2004, at M1 (discussing the Chinese stock market's recent drop to five year lows and citing poor regulation and a lack of transparency).

<sup>46</sup> See Leggett, *supra* note 4.

<sup>47</sup> In March 2004 Semiconductor Manufacturing International Corp. (SMIC) launched a \$1.8 billion IPO on the NYSE, netting investors Motorola, H&Q Asia Pacific, and Goldman Sachs large returns. Ctrip.com International Ltd. went public on the Nasdaq December 2003, creating over a 10x return for investor Carlyle Asian Ventures. See Ewing, *supra* note 44.

<sup>48</sup> See Chen & Western, *supra* note 45 (discussing the need for such a market as tough listing requirements have prevented many smaller, dynamic companies from seeking listings).

each industry must approve any merger or acquisition.<sup>49</sup> A final hope for selling an investment is that the arrival of more investors into China will, in and of itself, create potential for exits and increase liquidity in the market.<sup>50</sup>

*C. Chinese Culture: Great Profit Motive; Rules Made to Be Broken*

In China everything is for sale and everything is negotiable.<sup>51</sup> When negotiating is part of the culture, people develop the instincts to notice and take advantage of opportunities—a good trait for entrepreneurs.<sup>52</sup> However, the major risks for outside investors in China are the protection of intellectual property and trust. Information disclosure has already proven to be a problem, and no doubt will continue to be.<sup>53</sup> Such problems should not discourage investment, but should at least temper valuations.

<sup>49</sup> Moreover, when mergers cross over multiple industries, multiple approvals are needed. Han, *supra* note 44, at 475–76.

<sup>50</sup> De Ramos, *supra* note 42. Another long-term option may be the creation of an Asian Regional Exchange in which China and others participate. See Christopher M. Vaughn, Note, *Venture Capital in China: Developing a Regulatory Framework*, 16 COLUM. J. ASIAN L. 227, 246 (2002).

<sup>51</sup> There is a Starbucks in the Forbidden Palace in Beijing; obviously money can buy many opportunities in this nation.

<sup>52</sup> In fact, technologically-oriented entrepreneurship in China is thriving. Zhongguancun Science Park, Beijing's equivalent of Silicon Valley, in 2000 housed close to 5,000 hi-tech companies, over 200 research and development centers, and China's top three computer makers. See Vaughn, *supra* note 50, at 229 n.11. Moreover, entrepreneurship in general is becoming a much larger and vital part of the local economy. See generally Andrew Browne, *Enterprise: In the Land of Bok Choy, Spam Hits the Spot; Entrepreneur in China Builds Business Catering to Expatriate Appetites*, WALL ST. J., Feb. 8, 2005, at B7 (stating how private businesses are the fastest growing part of the Chinese economy).

<sup>53</sup> In commenting about private investment firm The Carlyle Group's planned \$1 billion of investment in China, Carlyle managing director and former investment banker from Goldman Sachs X.D. Yang stated: "There is no question [that] when you invest in a Chinese company you need to keep your eyes wide open." Carlyle Group, *supra* note 41; see also Peter Wonacott, *Buyer Beware: As Investors Rush into China, Cautionary Tales Start to Pile up; China Life Says it's a "Gold Mine" but Fails to Mention Probe by Government Auditors; Scandals as Signs of Progress*, WALL ST. J., May 17, 2004, at A1 (using China Life Insurance Co.'s NYSE listing as an example, discusses the difficulties Chinese companies have in grasping Western standards of disclosure).

Before investment, a very careful examination of the company, its balance sheet and income statements, and the reputations of its managers is a must. It is also important, if possible, to purchase enough stock to ensure the power to sway decision-making, as non-majority shareholders have little ability to influence company decisions or obtain information as a company grows. Using stock options as an incentive for management to align goals with investors is also key.<sup>54</sup>

Protection of intellectual property is a more difficult problem to solve. The Chinese traditionally feel that they should only pay for tangible goods, not intangible items such as software.<sup>55</sup> The enforcement problem is further complicated by a history of conflicting orders from different government administrations, leading many to get in the habit of ignoring government rules.<sup>56</sup> Interestingly, technology software is the one industry where China allows 100% foreign ownership. Some believe the incentive for China to change its mindset and enforce intellectual property laws will come once China becomes an intellectual property exporter.<sup>57</sup>

### III. THE REPUBLIC OF CHINA

The Republic of China ("Taiwan") was founded in part by Chinese capitalists who were pushed out of power by socialists during China's Cultural

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<sup>54</sup> *Carlyle Group*, *supra* note 41.

<sup>55</sup> *China: Protecting the Knowledge-based Economy and Intellectual Property Rights*, HARV. ASIA Q., at <http://www.fas.harvard.edu/~asiactr/haq/200102/0102a001cp5.htm> (last visited Feb. 23, 2005) [hereinafter *China Panel*].

<sup>56</sup> See Han, *supra* note 44, at 489. An ancient Chinese proverb states: "The mountain is high; the Emperor is far away" ("Shangao huangdi yuan."). See Fu, *supra* note 43, at 527 (arguing that a successful venture capital industry in China is only possible if the government is willing to develop and enforce a set of laws uniquely suited to Chinese society).

<sup>57</sup> See De Ramos, *supra* note 42; see also *China Panel*, *supra* note 55.

Revolution.<sup>58</sup> Taiwan may not have the economic power of China and Japan, and may not be as populated (21 million), however, Taiwan is still a major player in East Asia. Taiwanese investors can influence the flow of investment and business know-how to China and simply having the potential to affect such a major economic power makes Taiwan an important subject for study.<sup>59</sup> Furthermore, Taiwanese businesses are key players in semiconductor manufacturing, which keeps Taiwan strongly integrated into the global technology-oriented economy.<sup>60</sup>

### *A. Taiwan's Intellectual Property Laws*

#### *1. Patent and software protection*

Taiwan's laws are more straightforward and more in tune with current trends in Western intellectual property than China's laws. The Taiwanese government grants patents lasting twenty years from the date of filing<sup>61</sup> in three categories: inventions, new utility models, and new designs.<sup>62</sup> Patents cannot

<sup>58</sup> For Taiwanese, their island and surrounding territories are the temporary resting place of the true government of China. Even the government-sponsored web site states, "The Republic of China," not Taiwan. The People's Republic of China refers to the government in control of Mainland China since 1949. The Republic of China has never renounced its claim to being the sole legitimate government of all of China, nor does it view itself as an independent country. Lawrence L. C. Lee, *Integration of International Financial Regulatory Standards for the Chinese Economic Area: The Challenge for China, Hong Kong, and Taiwan*, 20 NW. J. INT'L L. & BUS. 1, 2 n.1 (1999).

<sup>59</sup> See generally *infra* note 60 (discussing China's reliance on Taiwan to develop their semiconductor industry).

<sup>60</sup> See Jason Dean, *China Sets Strait Chip Course; Semiconductor Sector Grows Amid Influx of Taiwanese Expertise*, ASIAN WALL ST. J., Feb. 17, 2004, at A1 (stating that the semiconductor industry helps give rise to more advanced technology-related businesses; Taiwan makes about a fifth of the world's computer memory chips, boasts a growing semiconductor-design industry, and dominates the fast-growing business of producing made-to-order chips; Taiwan Semiconductor Manufacturing Co. is the world's biggest producer of custom-made chips).

<sup>61</sup> Laws and Regulations Database of the Republic of China: Patent Law, art. 57, at <http://law.moj.gov.tw/Eng/Fnews/FnewsContent.asp?msgid=430&msgType=cn&keyword=patent+law> (last visited Feb. 23, 2005) [hereinafter Taiwan Patent].

<sup>62</sup> *Id.* art. 2.



apply to the following matters: research, educational or experimental not-for-profit pursuits, or where the invention has been in existence or used prior to the application.<sup>63</sup> An assignment or licensing of an invention cannot be conditioned on tie-ins.<sup>64</sup> In addition, an assignment or license of a patent with joint owners requires the consent of all owners.<sup>65</sup>

Software is copyrightable as “computer programs” and can be protected for the life of the author plus fifty years.<sup>66</sup> Unlike China, the compulsory licensing provisions have been removed from the law.<sup>67</sup> Also, unlike China, Taiwanese law covers “electronic rights management” issues, and bans the distribution of work where electronic rights management has been removed or altered.<sup>68</sup> Both the Taiwanese copyright and patent laws grant foreign applicants these rights unless the terms of a treaty or agreement provide otherwise.<sup>69</sup> For Taiwan this is somewhat significant since, as China refuses to recognize its existence as a separate nation or territory, Taiwan’s ability to sign certain treaties

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<sup>63</sup> *Id.* art. 57. Use prior to the application creates the same issue as in China -- a company needs to have filed the application before using the patented item in their business. See *infra* note 21.

<sup>64</sup> *Id.* art. 60. Tie-ins occur when a licensor requires the licensee to purchase something the licensee may not want in order to license their product. An example is requiring the purchase of a service or maintenance plan in order to license a certain machine. See generally, John T. Soma et al., *Antitrust Pitfalls in Licensing*, in 414 PRACTICING L. INST.: PAT., COPYRIGHTS, TRADEMARKS, AND LITERARY PROP. COURSE HANDBOOK SERIES 489, 513 (1995).

<sup>65</sup> Taiwan Patent, *supra* note 61, art. 61.

<sup>66</sup> Laws and Regulations Database of the Republic of China: Copyright Act, arts. 2, 30, at <http://law.moj.gov.tw/Eng/Fnews/FnewsContent.asp?msgid=427&msgType=en&keyword=copyright> (last visited Feb. 23, 2005) [hereinafter Taiwan Copyright].

<sup>67</sup> *Id.* arts. 67–68 (formerly the compulsory licensing provisions).

<sup>68</sup> *Id.* art. 80-1.

<sup>69</sup> *Id.*

is hindered.<sup>70</sup> For example, as a result of China's stance the United States is currently having difficulty updating its bilateral agreements with Taiwan.<sup>71</sup>

## 2. Damages and enforcement of intellectual property violations

Taiwan's penalties for intellectual property violations are stiff; a person who reproduces another's intellectual property with the intent to profit can be jailed for up to five years and ordered to pay severe fines.<sup>72</sup> Distributing an original work or a copy without the owner's consent is punishable by up to three years imprisonment and/or a fine.<sup>73</sup> The penalties for patent violations are slightly less stringent,<sup>74</sup> although fines do exist for selling, exhibiting, or importing an article with knowledge that it was manufactured without the patent holder's

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<sup>70</sup> See generally BILATERALS.ORG, US-TAIWAN, [http://www.bilaterals.org/rubrique.php3?id\\_rubrique=64](http://www.bilaterals.org/rubrique.php3?id_rubrique=64) (last visited Mar. 3, 2005) (discussing how the United States is reluctant to sign a free trade agreement with Taiwan given Taiwan's current political standing vis-à-vis China).

<sup>71</sup> *Id.* Nevertheless, Taiwan currently has the following agreements with the United States: Agreement on Copyright Protection between Coordinating Counsel for North American Affairs and American Institute in Taiwan (1993) and Memorandum of Understanding on Priority Right for Trademark and Patent between Taipei Representative Office in the U.S. and American Institute in Taiwan (1996).

<sup>72</sup> Fines can range from NT\$200,000 (New Taiwan Dollars) to NT\$2 million (the equivalent of \$6,200 to \$62,000 at the rate of NT\$1 = U.S. 3 cents). Reproduction onto an optical disk carries a potentially higher fine of up to NT\$ 5 million (about \$155,000). Reproduction without the intent to profit carries a penalty of up to three years of imprisonment and a fine up to NT\$750,000 (which includes a requirement that the number of copies reproduced exceeds five). Taiwan Copyright, *supra* note 66, arts. 91, 91-1.

<sup>73</sup> The fine is up to NT\$750,000 (about \$23,250). Where the infringing copy is an optical disk, potential imprisonment time is the same (three years), but the potential fine is increased to NT\$1,500,000. A person who, without intent to profit, infringes on the economic property rights of another person by distributing the original of a work or a copy thereof or by publicly displaying or possessing it with intent to distribute, where the number distributed exceeds five, or where the total amount of infringement calculated by the market value of lawful copies of the work at the time of seizure exceeds NT\$30,000, may be imprisoned for up to two years or ordered to pay a fine up to NT\$500,000. *Id.* Punishment is reduced if the offender confesses the source of the goods and the confession helps find the goods. *Id.* art. 91-1.

<sup>74</sup> The penalties for manufacturing an article covered by utility and new design patent without the patent holder's consent can lead to up to two years in jail and fines up to NT\$150,000. Taiwan Patent, *supra* note 61, art. 125-26. Invention patent violations have been deleted. See *id.* arts. 123-24, 127.

consent.<sup>75</sup> As with any intellectual property law, however, enforcement is what matters, and enforcement in Taiwan is lacking.<sup>76</sup> For years Taiwan has tried to clean up its intellectual property piracy issues, but changes in the laws have done little. In fact, Taiwan is currently on the U.S. "Priority Watch List" because of its poor intellectual property protections.<sup>77</sup>

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<sup>75</sup> The maximum for such crimes is up to six months in jail and/or up to a NT\$30,000 fine. *Id.* arts. 128–29.

<sup>76</sup> The cultural impediments evident in the surrounding nations are evident with Taiwan. Taiwan is pro-democracy and pro-capitalist and, due to its political situation, is in need of foreign acceptance and foreign business partners. Yet Taiwan is still unable to avoid criticism from the U.S. for its lack of software piracy enforcement. Taiwan's patent litigation procedure also has problems. Rhodes, *infra* note 77 (discussing how Taiwan lacks discovery procedures for private plaintiffs, making a substantial number of process patents unenforceable; chemical and pharmaceutical industries are dependant on process patents for protection of their R&D efforts).

<sup>77</sup> The United States Trade Representative (USTR) created a "Priority Watch List" and "Watch List" under Special 301 provisions. Placement of a trading partner on the Priority Watch List or Watch List indicates that particular problems exist in that country with respect to intellectual property rights ("IPR") protection, enforcement or market access for persons relying on intellectual property. Countries placed on the Priority Watch List are the focus of increased bilateral attention concerning the problem areas. See Warner Rose, *The U.S. Special 301 Process*, <http://usinfo.state.gov/products/pubs/intelprp/301.htm> (last visited Mar. 3, 2005). Countries are placed into one of four categories: (1) Priority Foreign Country; (2) Priority Watch List; (3) Watch List; or (4) Section 306 monitoring. Priority Foreign Countries that fail to enter into good faith negotiations or make significant progress in bilateral or multilateral negotiations to provide adequate and effective protection of IPR may be subject to sanctions. Currently, one country (Ukraine) is designated in this category and subject to \$75 million in sanctions. Countries that were previously designated a Priority Foreign Country but entered into good-faith negotiations and/or are making progress are placed under Section 306 monitoring; currently, China and Paraguay fall into this category. See OFFICE OF THE UNITED STATES TRADE REPRESENTATIVE, U.S. ELEVATES KOREA TO PRIORITY WATCH LIST BASED ON CONTINUED CONCERNS REGARDING FILM AND MUSIC PIRACY (2004), [http://www.ustr.gov/Document\\_Library/Press\\_Releases/2004/January/U.S.\\_Elevates\\_Korea\\_to\\_Priority\\_Watch\\_List\\_Based\\_on\\_Continued\\_Concerns\\_Regarding\\_Film\\_Music\\_Piracy.html](http://www.ustr.gov/Document_Library/Press_Releases/2004/January/U.S._Elevates_Korea_to_Priority_Watch_List_Based_on_Continued_Concerns_Regarding_Film_Music_Piracy.html) (last visited Mar. 3, 2005) [hereinafter KOREA ON PRIORITY WATCH LIST].

"Special 301" is the part of U.S. trade law that requires the USTR to identify countries that deny adequate protection for IPR or that deny fair and equitable market access for U.S. persons who rely on IPR. Under Special 301, countries that have the most egregious acts, policies, or practices, or whose acts, policies, or practices have the greatest adverse impact (actual or potential) on relevant U.S. products and are not engaged in good faith negotiations to address these problems, must be identified as "priority foreign countries." If so identified, the country could face bilateral U.S. trade sanctions if changes are not made that address U.S. concerns. The U.S. government is also making increased use of the World Trade Organization (WTO) dispute

### *B. Exit Opportunities: Open to Foreign Investment, High Liquidity*

Taiwan has both a traditional stock market (TSE) and a market organized for smaller, growth-oriented companies (OTCTC).<sup>78</sup> Individuals represent the majority of stock purchasers in Taiwan, and Taiwanese stocks have very high turnover ratios.<sup>79</sup> Thus, the potential for liquidity is high. Taiwan also recently relaxed its foreign investment controls, now allowing full ownership by foreigners.<sup>80</sup> The major risks for investments in Taiwan, then, include the lack of efficient market oversight<sup>81</sup> and, due to the political uncertainty between Taiwan and China, the constant potential that investments in Chinese companies and markets may need to be quickly withdrawn.<sup>82</sup>

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settlement system for IPR disputes with countries that are WTO members. South Korea and Taiwan are members of the WTO.

Other countries currently on the list include Argentina, the Bahamas, Brazil, Egypt, EU, India, Indonesia, Korea, Kuwait, Lebanon, Pakistan, the Philippines, Russia, Taiwan, and Turkey. See OFFICE OF THE UNITED STATES TRADE REPRESENTATIVE, SPECIAL 301 REPORT FINDS CONTINUED PROGRESS BUT SIGNIFICANT IMPROVEMENTS NEEDED (2004), [http://www.ustr.gov/Document\\_Library/Press\\_Releases/2004/May/Special\\_301\\_Report\\_Finds\\_Continued\\_Progress\\_But\\_Significant\\_Improvements\\_Needed.html](http://www.ustr.gov/Document_Library/Press_Releases/2004/May/Special_301_Report_Finds_Continued_Progress_But_Significant_Improvements_Needed.html) (last visited Mar. 3, 2005); see also generally Glenn W. Rhodes (partner, Howrey, Simon, Arnold, & White), *In Taiwan and Korea, Patent Laws Begin to Progress: Both Nations Have Revamped Their Systems, But the U.S. Still Criticizes Enforcement Process*, at <http://www.howrey.com/practices/ip/index.cfm?contentID=274> (last visited Mar. 3, 2005) (detailing changes in the intellectual property laws and dispute processes of Taiwan and South Korea, as well as the continued enforcement problems), reprinted in NAT'L L. J., Sept. 18, 2000.

<sup>78</sup> Lawrence S. Liu, *Law and Political Economy of Capital Market Regulation in the Republic of China on Taiwan*, 28 LAW & POL'Y INT'L BUS. 813, 827 (1997).

<sup>79</sup> *Id.*

<sup>80</sup> This law remains subject to the controlling government agency's emergency powers. *Id.*

<sup>81</sup> Lee, *supra* note 58, at 28. The Taiwanese civil law system makes financial disputes difficult to litigate, as several layers of agency approvals are necessary before seeking judicial review. Moreover, judges are not professionally or institutionally equipped to deal with financial issues. Liu, *supra* note 78, at 849–50.

<sup>82</sup> This despite that China still represents over 15% of Taiwanese investments. See generally *id.* at 822, 825; *Taiwan Fund Cracks Down on Early Investments in China: Prudence Is Told to Pull Out of Microchip Plant*, ASIAN WALL ST. J., Apr. 19, 2002, at A4.

*C. Taiwanese Culture: Western Capitalistic Values*

China still thinks of Taiwan as part of its country and the Chinese do not believe Taiwan should ever be considered or recognized as a separate entity.<sup>83</sup> However, Taiwan's approach to the business world clearly is different than China's. Taiwan can be viewed as the other end of the spectrum in Chinese governmental theory, with democracy and capitalism as core beliefs. In fact, China over time may gravitate towards this philosophy as they move away from pure socialism and towards market socialism. With their capitalistic history and democratic ideals, the Taiwanese are the most similar of the cultures discussed in this paper to the United States, and share many of the same business values and perspectives as Americans. Taiwan is the smallest market of those discussed in this article, but working with them to do business in other Asian countries would probably be beneficial. The Taiwanese capitalistic mindset and understanding of the cultures around them would be an asset for most Asian-focused ventures, even though Taiwan's tenuous relationship with China may make them tricky to align with on certain deals.<sup>84</sup>

## IV. THE EMPIRE OF JAPAN

While not recently ranking as a major area in Asia for venture investment (six other Asian nations ranked higher than Japan, including, China, Taiwan, and

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<sup>83</sup> See, e.g., *supra* notes 58, 70.

<sup>84</sup> For a different perspective, see Liu, *supra* note 78, at 845 (stating that Taiwan's emphasis on the personal relationships and family controlled aspects of business may make transactions among strangers more costly; also the Confucian negative view of merchants requires support for financial regulation from intellectuals and academics).

South Korea),<sup>85</sup> Japan is still one of the largest economies in the world, as well as one of the world's most successful creators and developers of technology.<sup>86</sup> As such, Japan will remain a major player in the field for the foreseeable future, and its laws and culture are worthy of close analysis.

### *A. Japan's Intellectual Property Laws*

#### *1. Patent and software protection*

The patent laws of Japan and the United States are similar in requiring utility, novelty, and non-obviousness, but differ in many other important procedural respects.<sup>87</sup> Most obvious is the first-to-file rule, which applies in Japan but is not incorporated into U.S. law.<sup>88</sup> In addition, Japan has a deferred examination period for patents. Under this rule, a patent application is examined only after a request for examination is filed. The request, however, must be filed within three years of the application filing date.<sup>89</sup> A deferred examination procedure may benefit smaller businesses who can save their money and wait to see if competitors are using the invention before spending more money prosecuting a patent on it.<sup>90</sup> These procedural differences may also provide some

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<sup>85</sup> In a survey conducted May 2003, fund managers in Asia ranked their interest in Asian markets as follows: China (97% interested), Hong Kong (51%), South Korea (45%), Taiwan (39%), followed by India, Singapore, and Japan. See De Ramos, *supra* note 42, at M5. However, in July 2002 Japan and South Korea were reported as having received the bulk of Venture Capital funds for the region. See *id.*

<sup>86</sup> See generally *infra* note 127.

<sup>87</sup> PORT & McALINN, *supra* note 13, at 735.

<sup>88</sup> *Id.*

<sup>89</sup> *Japan Patent Office Quick Guide: Procedures for Obtaining a Patent Right*, available at [http://www.jpo.go.jp/quick\\_c/index\\_tokkyo.htm](http://www.jpo.go.jp/quick_c/index_tokkyo.htm) (last visited April 1, 2005). This was recently changed from seven years. PORT & McALINN, *supra* note 13, at 736.

<sup>90</sup> *Id.*

explanation of why twice as many patent applications in are filed Japan as in the United States, but only half as many patents are granted.<sup>91</sup>

Japanese patent law seems to be narrower in scope than the United States equivalent when it comes to the patentability of software. In Japan, software is patentable only if the applicant can show that it, like any other invention in Japan, is “applicable to industry.”<sup>92</sup> The law covers the works of the Japanese (including companies with their principal offices in Japan), works first published in Japan,<sup>93</sup> and works granted protection under an international treaty obligation.<sup>94</sup> A 1985 amendment to Japan’s Copyright Law added “program works” to Japan’s list of protected works.<sup>95</sup> Unlike other nations, Japan specifies that copies for private use are not considered infringement unless they utilize technological circumven-

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<sup>91</sup> The procedural differences may provide some explanation for these figures, although other reasons, such as Japanese business strategies, may explain this data. Japanese companies believe that the more patents a company has, the better off it will be in carving up market share and formulating cross-licenses to obtain needed inventions. Therefore, they file many applications. *See id.* at 741.

<sup>92</sup> *See id.* at 740 (citing Jack M. Haynes, *Computer Software: Intellectual Property Protection in the United States and Japan*, 13 J. MARSHALL J. COMPUTER & INFO. L. 245, 261 (1995)). The broader U.S. law states: “Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement therefore, may obtain a patent thereof, subject to the conditions and requirements of this title.” 35 U.S.C. § 101 (2002).

<sup>93</sup> These include those first published outside Japan and published in Japan within thirty days of the first publication. Copyright Research and Information Center, Copyright Law of Japan, art. 6, at [http://www.eric.or.jp/eric\\_c/elj/elj.html](http://www.eric.or.jp/eric_c/elj/elj.html) (last visited Mar. 3, 2005) [hereinafter Japan Copyright].

<sup>94</sup> *Id.* art. 6. If an international treaty provides otherwise with respect to the rights of authors and the rights neighboring thereon, the provisions thereof shall prevail. *Id.* art. 5.

<sup>95</sup> Japan Copyright, *supra* note 93, art. 10; PORT & McALINN, *supra* note 13, at 674. The law defines a “program” as “an expression of combined instructions given to a computer as to make it function and obtain a certain result.” Japan Copyright, *supra* note 93, art. 2 (*xbis*). For a definition of technological protection measures, *see id.* art. 2(xx). Program works can be registered, although many Japanese scholars feel it is too early to tell if the Program Registration Law is of practical importance to the software industry. *Id.* art. 76bis; PORT & McALINN, *supra* note 13, at 675.

tion of protective measures.<sup>96</sup> Japan also uses compulsory licenses for patents and copyrights, but in a fashion that is still relatively more protective of the patent holder's rights than in a nation like China.<sup>97</sup> Japanese copyright law protects software for fifty years if the author is a legal person (e.g. a corporation) and for fifty years following the death of the author if he or she is a natural person.<sup>98</sup>

Japanese software protections are not as strong as in the United States. Japanese law lacks protection of interfaces, has an unclear legal distinction between lawful upgrading and prohibited adaptations, and creates difficulty in distinguishing between "the idea" and "the expression" for new computer programs (i.e. when it is legal to create new programs based on the idea of an old program).<sup>99</sup> Moreover, Japanese court decisions in these areas are lacking or ambiguous.<sup>100</sup>

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<sup>96</sup> Japan Copyright, *supra* note 93, art. 30. Other possibly relevant exceptions are for school and educational related uses. *See generally id.* arts. 30-50.

<sup>97</sup> Compulsory patent licenses may be granted after three or more consecutive years if the patent is unused, if deemed necessary to public interest, or if the patent is needed for another patent to work and its owner is uncooperative. *See* Edward Fitzpatrick & Heidi C. Chen, *Licensing in Asia*, 454 PRACTICING L. INST.: PAT., COPYRIGHTS, TRADEMARKS, AND LITERARY PROP. COURSE HANDBOOK SERIES 381, 388 (1996), available at WL 454 PIL/PAT 381. Compulsory licenses apply to copyrighted works only where no owner of the copyright can be found. Japan Copyright, *supra* note 93, arts. 67-70. This may be explained by the purpose of Japan's copyright law, which is to have "regard to a just and fair exploitation of these cultural products, and thereby to contribute to the development of culture." *Id.* art. 1.

<sup>98</sup> These rights include the right to copy, play, broadcast, translate, modify, or adapt a copyrighted work. Moral rights are granted, although exceptions are made for modifications necessary to use the program in a particular computer or to use it effectively. PORT & MCALINN, *supra* note 13, at 674. The distinction between natural and legal persons was necessary because computer programs made for an employer may not be made public under the name of the employer. *Id.*

<sup>99</sup> *Id.* at 675. On a side note, a similar problem with distinguishing "the idea" and "the expression" exists in the United States.

<sup>100</sup> *See generally id.* at 670-76.



## 2. Difficulty of litigation

Certain aspects of Japanese law and culture are relevant to intellectual property agreements. First, intellectual property law violations are much less of a problem in Japan than in other Asian countries.<sup>101</sup> Second, Japanese law makes it very difficult to cancel any business agreement (whether IP related or not). For example, even though a licensing contract may list reasons the licensor can terminate an agreement, the licensor may still not legally be able to do so. Japanese law takes into consideration, among other things, the length of the agreement and the reliance of the other party for its business.<sup>102</sup> This is consistent with Japan's cultural priority of promoting societal harmony and consistency (a concept gathered into the single Japanese word "*wa*").

Third, it is well documented that Japan is not a litigation-minded culture.<sup>103</sup> Still, Japan's rule based legal system is beginning to integrate common law.<sup>104</sup> While rules will generally dictate decisions, litigation and case law now, more than in the past, can play a significant role in resolving disputes.<sup>105</sup>

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<sup>101</sup> Two reasons may account for this: the Buddhist/Shinto culture and the size of the computer software market. It was the author's experience that you could leave a bike unlocked on the street in the middle of Tokyo and, assuming no laws were violated, it would still be there when you came back. Simply put, people do not steal. Moreover, the total value of the computer software market in Japan is estimated to be over \$40 billion. Thus, the highly successful Japanese software and gaming corporations are motivated to push the government to enforce IP rights. On the other hand, the increased demand and high consumer prices in Japan, in theory, encourages unauthorized copying. See generally *id.* at 669; see also Fitzpatrick & Chen, *supra* note 97, at 387.

<sup>102</sup> See PORT & McALINN, *supra* note 13, at 484-89.

<sup>103</sup> See generally *id.* at 385-424.

<sup>104</sup> See *id.* at 66.

<sup>105</sup> See generally *Genetech Wins Patent Decision in Japanese Case*, ASIAN WALL ST. J., Oct. 30, 1991, at 3 (discussing Genetech's precedent setting victory in Japan's first major biotechnology patent case); see generally *infra* note 127 (Blue LED case).

However, when litigation does occur, cases can take years, and the discovery rules do not permit evidentiary discovery.<sup>106</sup> This makes a well-drafted arbitration clause necessary for all agreements.<sup>107</sup>

*B. Laws and Practice Unfavorable to Innovation-Oriented Venture Capital*

Most, if not all, of the standard agreements in U.S. venture financing deals can be utilized by investors in Japan either through law or contract.<sup>108</sup> However, certain laws and common practice limit the potential for these investments to foster the development of new and risky ideas through start-up entities. Venture capital investments in Japan usually occur in the form of loans and usually come from banks (while in the United States venture funds use their capital to purchase equity in their investment companies).<sup>109</sup> In fact, because of Japan's Anti-Monopoly Act, which prohibits the formation of holding companies, more than half of Japan's venture capital firms operate as subsidiaries of banks, securities firms, or insurance companies.<sup>110</sup> Loans for start-up companies create two problems: first, money is being spent by the company to repay loans and not on the business; second, loans limit investor upside to interest (equity has no upside cap). Not surprisingly, most venture investments in Japan go to safer, intermediate-stage companies that support the parent corporation's interests and,

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<sup>106</sup> See PORT & McALINN, *supra* note 13, at 737.

<sup>107</sup> If the arbitration must take place in Tokyo (which is best to be avoided for foreigners, mostly because of the expense of staying in Tokyo for the hearing), be sure to state in the agreement that the arbitration will take place in English.

<sup>108</sup> See generally Kenneth J. Lebrun, *Making a Private Equity/Venture Capital Investment in Japan: Implementing Techniques Commonly Used in U.S. Transactions*, 23 U. PA. J. INT'L ECON. L. 213 (2002).

<sup>109</sup> See Milhaupt, *supra* note 1, at 878.

<sup>110</sup> A holding company is a parent company that holds ownership in many other companies. See Milhaupt, *supra* note 1, at 866, 877. The Anti-Monopoly Act was created to put an end to several major families running all the businesses in Japan. Mitsubishi, for example, was one of those families. See *infra* note 114.

as a result, are not used solely to fund innovation.<sup>111</sup> Japan's laws also discourage the use of stock options.<sup>112</sup> Stock options are a critical tool that start-ups use to increase the financial upside for employees and management who leave stable jobs to work for an unknown entity.

*C. Exit Opportunities: Merger Activity Light; Long Length of Time to Initial Public Offerings*

The typical exits through initial public offerings ("IPO") or mergers and acquisitions are not very good options for technology oriented Japanese ventures. Mergers and acquisitions are simply not popular liquidity vehicles in Japan, as the total dollar amount of acquisitions in Japan is about one tenth the amount in the United States (and one-third of that amount is for acquisitions of foreign companies by Japanese companies).<sup>113</sup> This could be because many Japanese companies are already invested in young companies from their inception through cross-shareholding and do not need to acquire them. After all, while Japan did enact the Anti-Monopoly Act to discourage business conglomerates, such practices were never truly eradicated.<sup>114</sup>

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<sup>111</sup> See generally Milhaupt, *supra* note 1, at 878-79.

<sup>112</sup> See *id.* at 889 (discussing how Japanese law makes the issuance of stock options so cumbersome it is "practically unworkable"). Another factor working against creating a start-up company in Japan: incorporation costs are very expensive. The minimum paid-in capital requirement for a Kabushiki Kaisha ("K.K."), the most respected business form in Japan, is 100 million yen (roughly \$100,000). See PORT & McALINN, *supra* note 13, at 493. By comparison, a Delaware corporation in the United States (the most utilized State for incorporation) has negligible paid-in capital requirements.

<sup>113</sup> Eric C. Sibbitt, *Law, Venture Capital, and Entrepreneurism in Japan: A Microeconomic Perspective on the Impact of Law on the Generation and Financing of Venture Business*, 13 CONN. J. INT'L L. 61, 69 (1998).

<sup>114</sup> The Anti-Monopoly Act was enacted to break up the *zaibatsu* (Japan's pre WWII family/corporate cartels). The *keiretsu* (business conglomerates) took their place and have achieved similar economic power. See PORT & McALINN, *supra* note 13, at 764. For a discussion of Japan's Anti-Monopoly Law history, see *id.* at 760-81.

For IPOs, the time to reach a public offering from incorporation is very long. The average time from corporate formation to IPO in the United States is four to seven years; in Japan it is over twenty years.<sup>115</sup> For companies with emerging technology, this time table is simply not feasible. This delay has been caused by two factors: a previously imposed queue of listings to maintain market stability, and strict profit and assets requirements for listing.<sup>116</sup> These requirements were aimed at promoting confidence in the markets by only allowing the healthiest companies to go public; however, the effect has been essentially to prevent future-oriented firms with longer-term profit potential from listing on Japan's most utilized exchange.<sup>117</sup>

To aid future-oriented companies, Japan created a second over-the-counter market called the Frontier Market.<sup>118</sup> Money-losing firms can be listed on the Frontier Market if they meet certain requirements, but they must adhere to stricter disclosure standards.<sup>119</sup> Still, because Japanese institutional investors are risk-adverse, they have in the past avoided large investments in emerging technology offerings.<sup>120</sup>

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<sup>115</sup> Sibbitt, *supra* note 113, at 63.

<sup>116</sup> *Id.* at 67–68. Japan had required \$100 million in net assets and over \$3 million in operating profits. *Id.* As an example, the NASDAQ SmallCap Market requires for initial listings, \$5 million in stockholders' equity or \$750,000 in net income in two of the last three years. See NASDAQ, LISTING STANDARDS AND FEES 5–6 (2005), available at [http://www.nasdaq.com/about/nasdaq\\_listing\\_req\\_fees.pdf](http://www.nasdaq.com/about/nasdaq_listing_req_fees.pdf) (last visited Mar. 3, 2005).

<sup>117</sup> Sibbitt, *supra* note 113, at 67–68.

<sup>118</sup> The "Frontier Market" was created in 1996. *Id.*

<sup>119</sup> They need to have over fifty shareholders and to have invested 3% of their sales revenues in research and development in the year prior to listing. *Id.* (citing Nicholas E. Benes, *Why Venture Capital Investment in Japan Will Grow*, ASIAN VENTURE CAP. J., July 1996).

<sup>120</sup> See generally *id.* at 84.

*D. Japan: Not a Culture of Risk Takers*

Fertile ground for technology entrepreneurs would require proper educational facilities, investment capital, and an entrepreneurial mindset. Japan possesses the first two, but Japanese culture does not fully support an entrepreneurial mindset.<sup>121</sup> The Japanese make decisions through group approval and try to limit risk in business ventures and investments.<sup>122</sup> The Japanese will also usually shy away from being different. In America the concept of being “an individual” and gaining personal achievement is part of the culture, supported by television shows, books, and movies. The Japanese are more group-oriented. Their culture supports the idea of dependably assuming your role, blending into the group, and maintaining harmony.<sup>123</sup> This helps explain their corporate culture and mentality as well.<sup>124</sup> In Japan, rules, structure, and hierarchy are meant to be

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<sup>121</sup> The technology training of the Japanese is possibly superior to that of the United States. *See id.* at 81–82 (citing superior grounding in educational fundamentals and high math and science achievement scores of Japanese students; but noting a lack of creativity in teaching due to emphasis on standardized test scores).

<sup>122</sup> *See generally* Sachiko Hirao, *Naturalized Entrepreneur Jumps Conservative Obstacles*, JAPAN TIMES ONLINE, May 5, 2002, at <http://www.japantimes.co.jp/cgi-bin/getarticle.pl5?nn20020505a4.htm> (last visited Mar. 17, 2005) (discussing a Chinese born naturalized Japanese entrepreneur's difficulties in overcoming the “innate conservativeness of Japanese companies” in trying to get them to leave their past suppliers to use his company, or his troubles in trying to recruit people because he cannot offer the same security and stability as larger companies; he states: “I have no worries about money, market demand, or technology . . . [b]ut it is difficult to recruit people”).

<sup>123</sup> Yuri Kageyama, *Changing The World One Byte At A Time: Internet Star Spreads The Blogging Gospel*, JAPAN TIMES ONLINE, June 3, 2004, at <http://www.japantimes.co.jp/cgi-bin/getarticle.pl5?nn20040603a8.htm> (last visited Mar. 17, 2005) (discussing how, in a society that emphasizes conformity and harmony, blogging makes it easier for people to express their opinion and debate). The entrepreneur who is the subject of this article - Joichi Ito - spent his childhood in Canada and the United States and attended international schools in Japan. *Id.* The Japanese also have a proverb: “the nail that sticks up gets hammered down” (*deru kui ga uttareru*). Sibbitt, *supra* note 113, at 81.

<sup>124</sup> Concepts such as “lifetime employment” in major Japanese companies and a disdain for layoffs are examples of how the government, business leaders, and the work force cooperate to maintain social stability. Promotion and pay raises based on seniority and an ability to work in a group (rather than for individual achievement) are further examples of this mentality. *See generally* PORT & McALINN, *supra* note 13,

followed and assuming and accepting a life that includes the daily risk of an entrepreneurial venture may not come easily.<sup>125</sup> However, over the past twenty years, Japan has proven to be very successful in developing technology and in developing new ideas;<sup>126</sup> hence, their deference to group interests and careful and conservative decision making is not necessarily incompatible with successful entrepreneurship.<sup>127</sup>

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p.543–545, 554–558 (discussing how a willingness by Japanese employees to change companies is seen as a “sign of instability” and denotes an “underlying lack of trustworthiness,” as opposed to employees in the West, where job hopping is commonly seen as a “method of résumé building and skills acquisition”).

<sup>125</sup> See, e.g., *supra* note 122. On the other hand, the lack of entrepreneurial activity may simply be a decision based on economics, as the Japanese entrepreneur can expect to have, on average, lower and slower returns, higher costs of failure, and a lower likelihood of success. See Sibbitt, *supra* note 113, at 83. Japanese reputation for risk adversity is also noticeable in their investment decisions. They keep a much larger amount of capital in bank deposits than Americans and are the biggest purchasers of U.S. Treasuries. *Id.* at 84.

<sup>126</sup> *Id.* at 81–82 (citing Honda, Kyocera, Matsushita, and Sony and the creation of products such as instant Ramen noodles, the Walkman, Donkey Kong, Karaoke, Nintendo, and the disposable camera). In the late 1990s Japan also began to focus on increasing university development of venture businesses. See generally *id.* at 84. The Kansai region of Japan (Osaka, Kyoto) has also developed a reputation for creating entrepreneurs, including the founder of Cybird, a revolutionary m-commerce (mobile-to-mobile) business. See Alex Stewart, *Why do Cybirds Suddenly Appear? The Migration Path of a Mobile Internet Company*, JAPAN-INC., August 2003, available at <http://www.japaninc.net/print.php?articleID=1158> (last visited Mar. 16, 2005). More recently, Japan has taken the lead in Smart Transport Systems for automobiles, which zaps computerized data to cars so they can adjust to changing traffic patterns. See Yuri Kageyama, *Smart Transport Systems Catch on in Japan*, THE BOSTON GLOBE, Dec. 29, 2004, available at [http://www.boston.com/business/technology/articles/2004/12/29/japan\\_slow\\_to\\_catch\\_on\\_to\\_smart\\_transport/](http://www.boston.com/business/technology/articles/2004/12/29/japan_slow_to_catch_on_to_smart_transport/) (last visited Mar. 3, 2005). The author was personally impressed with the ubiquitous heated toilet seats and bathtubs that automatically filled up and maintained a digitally set temperature.

<sup>127</sup> On the other hand, a patent dispute filed in 2001 over the invention of the DVD blue light-emitting diode (LED) technology (which allowed for DVD recording and is utilized on mobile phone screens) highlights many of the issues discussed in this paper and reveals how top researchers and developers can become frustrated with the inability of Japanese companies to reward individual achievement. In 2004, the Tokyo District Court granted the inventor of the technology half of the patent royalties that his employer, Nichia Corporation, earned from the invention. See *Creator of Blue LED Wins 20 Billion Yen Patent Payout: Nichia Had Earlier Awarded Him With 20,000 Yen*, JAPAN TIMES ONLINE, Jan. 31, 2004, <http://www.japantimes.co.jp/cgi-bin/makeprfy.pl5?nn20040131a1.htm> (last visited Mar. 30, 2005) (discussing how Shuji Nakamura, now a professor at the University of California at Santa Barbara, developed the technology in 1993 despite the company’s orders to cease his work because they viewed it as “an impossible feat;” if he had not won the case Nakamura said he “would have told his fellow researchers to travel to the

## V. THE REPUBLIC OF KOREA

The Republic of Korea ("South Korea") provides a mix of Western business ideas and Eastern culture. Its situation is further flavored by the natural rivalry created between the two cultures that surround it geographically—China and Japan. South Korea's government supported focus on developing the technology industry and its incredibly high population density also creates a strong market for testing technological advances.<sup>128</sup>

*A. South Korea's Intellectual Property Laws**1. Patents*

The purpose of South Korea's Patent Act is to encourage, protect, and utilize inventions, thereby improving and developing technology and contributing to the development of industry.<sup>129</sup> South Korea allows for patents on an invention so long as it is a highly advanced creation of any technical idea applying any law of nature, or an invention capable of industrial application which is not publicly known.<sup>130</sup> South Korea follows the first-to-file rule, and patents are effective from issuance until the twentieth anniversary of the filing

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United States"). Nichia Corporation appealed the ruling, and Professor Nakamura and Nichia Corporation eventually reached a court-mediated settlement for the equivalent of about \$8 million. *See Blue LED Inventor To Get 843 Million Yen: Settlement Lets Nichia Off Hook For 20 Billion Yen*, JAPAN TIMES ONLINE, Jan. 12, 2005, <http://www.japantimes.co.jp/cgi-bin/makeprfy.pl5?nn20050112a1.htm> (last visited Mar. 30, 2005) (stating that this case "symbolize[d] the struggle of individual workers against companies over intellectual property rights in a nation where selfless corporate devotion has long been the rule" and how Nakamura was "totally dissatisfied" with the deal, but accepted it because his lawyer believed that "a long legal dispute would be a burden"; the settlement figures were based on a cap set by the Tokyo High Court out of concern for Nichia's "financial health").

<sup>128</sup> See generally Bernard Pointeau, *Rethinking Korea: Full Speed Ahead*, ASIAN WALL ST. J., Nov. 13, 2000, at 6.

<sup>129</sup> South Korea Patent Act (2001) Act No. 6582, Dec. 31, 2001, art. 1, *translation at* <http://www.moleg.go.kr> (last visited Feb. 17, 2005) [hereinafter SK Patent Law].

<sup>130</sup> SK Patent Law, *supra* note 129, art. 26.

date.<sup>131</sup> The patentee has an exclusive right to embody the patented invention and can give another person an exclusive or ordinary license to embody the patented invention.<sup>132</sup> Foreigners are allowed to file patents in South Korea by treaty or if their country grants South Koreans similar rights.<sup>133</sup> Moreover, patent rights granted by treaty are given priority over national law.<sup>134</sup>

If an employee obtains a patent for an invention which can be attributed to that employee's work for his or her employer, the employer by law is automatically given a non-exclusive license on the patent.<sup>135</sup> If an invention is made by an employee in connection with his duties, the patent belongs to the employer.

## 2. Software

South Korea provides for the copyright protection of computer programs under their Computer Programs Protection Act ("CPPA").<sup>136</sup> The purposes of the CPPA are to contribute to the sound development of the national economy by protecting the author's rights in computer program works, to encourage fair use of computer program works, and to promote relevant industries and technologies.<sup>137</sup> The CPPA grants software copyright holders the right to reproduce, adapt, translate, distribute, publish, and transmit the program for fifty years from the

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<sup>131</sup> *Id.* art. 36.

<sup>132</sup> *Id.* art. 37.

<sup>133</sup> *Id.* art. 25. Foreigners applying for a patent, if they are not residing in South Korea, must utilize a patent agent during the application process. *Id.* art. 5.

<sup>134</sup> *Id.* art. 26.

<sup>135</sup> *Id.* art. 39.

<sup>136</sup> South Korea Copyright Act, art. 4(9), available at [http://www.moleg.go.kr/english/page\\_link.php?left=left.php&main=econo\\_display.php&code=35&page=4&key=&keyfield](http://www.moleg.go.kr/english/page_link.php?left=left.php&main=econo_display.php&code=35&page=4&key=&keyfield) (last visited Mar. 3, 2005).

<sup>137</sup> South Korea Computer Programs Protection Act, Act No. 6357, art. 1 (2002), available at [http://www.moleg.go.kr/english/page\\_link.php?left=left.php&main=econo\\_display.php&code=36&page=4&key=&keyfield](http://www.moleg.go.kr/english/page_link.php?left=left.php&main=econo_display.php&code=36&page=4&key=&keyfield) (last visited Mar. 16, 2005) [hereinafter South Korea CPPA]. The term "computer program works" means creative works expressed as a series of instructions and commands used directly or indirectly in an apparatus having data processing capacity such as a computer, etc. (hereinafter referred to as "computer") for the purpose of obtaining a certain result. *Id.* art. 2.



date of publication.<sup>138</sup> This includes the right to disclose the program or not.<sup>139</sup> The copyright will not apply to uses for certain education purposes.<sup>140</sup>

The CPPA creates some obstacles for jointly created programs. The copyright for a program created by two or more people or entities cannot be exercised without an agreement of all the copyright co-owners.<sup>141</sup> In addition, no co-owner can transfer his or her portion without consent of the other co-owners.<sup>142</sup> CPPA coverage of programs created by foreigners will be extended if the foreign nation and South Korea have a reciprocal agreement, or if the program was created by a foreign corporation with its principal office in South Korea and was first published in South Korea.<sup>143</sup>

The CPPA does not apply to programming languages (a system of signs and characters as a means to express a program), rules (a specific programming language convention used in a specific program), or algorithms (a method of combining instructions and commands in a program).<sup>144</sup> New rules have also been enacted regarding reverse engineering of program codes, making reverse engineering legal without the consent of the program copyright holder only when

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<sup>138</sup> *Id.* art. 7. An extension of five years is available if there was a period that the patent could not be worked. *Id.* art. 89-90.

<sup>139</sup> *Id.* art. 8.

<sup>140</sup> *Id.* art. 12.

<sup>141</sup> *Id.* art. 11.

<sup>142</sup> *Id.* art. 11(2)-11(3). "Each co-owner" cannot in good faith "unreasonably withhold or refuse his consent." "If one of the copyright co-owners in the joint creation program dies without leaving an heir, or gives up his portion, the portion shall be distributed to other co-owners in proportion to their pro-rata portion." *Id.*

<sup>143</sup> *Id.* art. 6.

<sup>144</sup> *Id.* art. 3.

necessary for compatibility.<sup>145</sup> Information obtained as a result of the reverse engineering of program codes under this exception cannot be used for developing, producing, and selling a program that is practically similar in expression to a protected program.<sup>146</sup>

### *3. Intellectual property enforcement provisions in South Korea*

Copyright infringement of programs includes, among other things: (1) importing an infringing program for distribution in Korea; (2) using for business purposes a reproduction of an infringing program; and (3) intentionally removing or modifying the copyright management information without proper legal basis.<sup>147</sup> While an individual is strictly liable for importing and distributing in Korea a program that infringes a program copyright, those who use and distribute programs without knowledge of the illegal circumstances are not guilty of infringement.<sup>148</sup> This is less stringent than a strict liability standard for trafficking infringed material, which therefore can create obstacles for prosecution and enforcement.

South Korea also makes it illegal for any person to disarm technical protective measures or to provide equipment, devices, or parts that are used to disarm technical protective measures.<sup>149</sup> Furthermore, it is illegal to distribute

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<sup>145</sup> *Id.* art. 12-2.

<sup>146</sup> *Id.*

<sup>147</sup> *Id.* art. 29.

<sup>148</sup> *Id.*

<sup>149</sup> *Id.* art. 30. Several exceptions apply under article 30(1), including when it is necessary for a person using a program with proper legal basis to maintain the compatibility with other programs, in case a revision or update of the program is requested by the end user with proper legal basis, and in case it is necessary for a person using a program with a proper legal basis to analyze the encryption in connection with the program for the purpose of study and education. *Id.*

programs or technology that are “considerably dedicated” to disarming technical protection measures.<sup>150</sup> Reasonable damages can be assessed by the court for lost profits.<sup>151</sup>

South Korea’s statutory provisions and enforcement practices have been in violation of its international obligations since the early 1990s, and South Korea has been on the United States’ “Priority Watch List” or “Watch List” since 1992.<sup>152</sup> Software piracy has represented roughly 60% of the estimated monetary losses due to intellectual property violations in South Korea.<sup>153</sup> The commitment to enforcement is inconsistent and focused mostly on small companies, making it difficult to create a significant dent in South Korea’s end-user piracy problem.<sup>154</sup>

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<sup>150</sup> *Id.*

<sup>151</sup> *Id.* art. 32.

<sup>152</sup> For a description of “Priority Watch List” and “Watch List,” see OFFICE OF THE UNITED STATES TRADE REPRESENTATIVE, *supra* note 77; see also Seah Park & Neal King Jr., *Trade: Seoul Vows to Fight Piracy of U.S. Copyrights*, ASIAN WALL ST. J., Jan. 12, 2004, at A5 (discussing how the United States is considering pushing for WTO sanctions against South Korea for their inability to enforce intellectual property violations; movies, music, and computer programs are the main problems).

<sup>153</sup> See KOREA: EXCERPT FROM THE IIPA SPECIAL 301 RECOMMENDATIONS, Feb. 20, 1996, at [http://www.iipa.com/rbc/1996/rbc\\_south\\_korea\\_301\\_96.html](http://www.iipa.com/rbc/1996/rbc_south_korea_301_96.html) (last visited Mar. 3, 2005) (discussing, *inter alia*, South Korea’s violations of the enforcement procedures and deterrent penalties of TRIPS (Trade-Related Aspects of Intellectual Property) Part III, Articles 41, 50, and 61) [hereinafter SPECIAL 301 RECOMMENDATIONS].

<sup>154</sup> See *id.* Moreover, the U.S. Government found that the Government of Korea has not yet taken necessary action on two of the highest priority issues included in the out-of-cycle review: 1) fulfilling its April 2002 commitment to submit legislation providing for the full right of transmission for sound recordings; and 2) fulfilling its commitment to fully resolve the film piracy issue as it pertains to the Korea Media Rating Board (KMRB). See KOREA ON PRIORITY WATCH LIST, *supra* note 77. One U.S. Trade Report listed the following recommended changes:

- Allocating more prosecutorial resources to end-user piracy cases, and providing training to law enforcement officials in conducting these cases. Korean commitments in this area should be specific, quantifiable, and verifiable.

- Developing consistent nationwide standards for initiating end-user cases, evaluating evidence, and recommending sentences and dispositions.

### B. Exit Opportunities

Like Japan, in 1996 South Korea created a secondary, over-the-counter market, modeled after the NASDAQ, called KOSDAQ. This market was created to support small businesses and venture firms specializing in the high-tech and biotechnology areas.<sup>155</sup> This market has thrived since its inception.<sup>156</sup>

### C. South Korean Culture: Entrepreneurship Growing; Superior Internet Infrastructure

Both geographically and psychologically, South Korea is a mix of China and Japan. Going out on one's own is not culturally supported, but the idea of remaining economically competitive in the region and globally appears to make

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- Committing to aggressive enforcement in end-user cases, including targeting of large *chaebol* companies when supported by evidence of end-user infringement.

- Imposing the enhanced penalties - including imprisonment in appropriate cases - made available by recent changes in law.

- Ensuring better security and more aggressive field investigations by prosecutors, so that evidence of end-user piracy can be gathered without tipping off violators.

- Initiating end-user cases (as in cases involving small dealers and training institutes) without the necessity for the copyright owner to file a formal complaint.

- Designating software piracy as a "public offense" and thus eliminating the requirement for a formal complaint prior to criminal enforcement;

- Revising the CPPA to establish presumptions for damages, reform the registration process, and narrow the scope of CPPA's "educational" and "personal use" exemptions, to prevent their abuse for commercial gain.

See SPECIAL 301 RECOMMENDATIONS, *supra* note 152.

<sup>155</sup> Eugene Kim, *Venture Capital Contracting Under the Korean Commercial Code: Adopting U.S. Techniques in South Korean Transactions*, 13 PAC. RIM L. & POL'Y J. 439, 465 n.179 (2004), citing Hwa-Jin Kim, *Living with the IMF: A New Approach to Corporate Governance and Regulation of Financial Institutions in Korea*, 17 BERKELEY J. INT'L L. 61, 75 (1999).

<sup>156</sup> This despite some risk of self-dealing. See Bernard Black, *Corporate Governance in Korea at the Millennium: Enhancing International Competitiveness*, 26 J. CORP. L. 537, 540 (2001). Black's article also concludes that South Korea's regulators and judges are honest (though possibly not the politicians, yet) and the service providers (business lawyers, accountants and investment bankers) are Western-trained, although the judges are inexperienced in commercial and securities cases. *Id.*

South Korea amenable to innovation.<sup>157</sup> Bankruptcies of two major chaebol (South Korea's major business conglomerates) have led young graduates to establish their own companies.<sup>158</sup> Experts covering South Korea now believe the era of chaebol dominance in South Korea is ending and that venture-backed startups are set to play an important part in South Korea's future.<sup>159</sup> Both of these reasons may explain the shift in the acceptability of entrepreneurship by the South Koreans in the late 1990s, when young people broke out from the more conservative corporate path and began creating businesses of their own.<sup>160</sup>

Moreover, the population density of this tiny country and the government's support of technological development make it ripe to test certain advancements before other countries.<sup>161</sup> The government has invested over \$35 billion to establish a nationwide high-speed Internet infrastructure and change the economy to accommodate Internet and information-based technology developments.<sup>162</sup> Because of this investment South Korea has enjoyed the highest rate of

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<sup>157</sup> After all, Japan occupied South Korea for the first half of the twentieth century. Prior to that China occupied the region for centuries.

<sup>158</sup> See generally Michael Schuman, *Koreans Find the Entrepreneurial Spark: As Conglomerates' Woes Mount, Risk-Taking Graduates Start Businesses*, *ASIAN WALL ST. J.*, June 11, 1997, at 1. The government also began to lend such ventures money at rates which were half off from market rates and government policy makers even considered exempting certain young entrepreneurs from military service. *Id.*

<sup>159</sup> See Black, *supra* note 156, at 544.

<sup>160</sup> Still, cultural obstacles remain such as the social and financial stigma of switching jobs or acting against common wisdom, the socially taboo aspect of downsizing, and the desire to avoid sales of the country's assets to foreigners. See Pointeau, *supra* note 128.

<sup>161</sup> South Korea, which has a population of just under 50 million and is about the size of Indiana, is already strong in consumer electronics and semiconductors, with companies like Goldstar and Samsung. Black, *supra* note 156, at 539.

<sup>162</sup> *South Korea Earmarks More than \$35 Billion for Internet Pathways*, *ASIAN WALL ST. J.*, Jan. 18, 2000, at 18.

broadband usage in the world, estimated at 75% as far back as 2002.<sup>163</sup> South Korean broadband is also faster than anywhere else in the world. In 2004 South Korean Internet users were able to transfer information at speeds up to four times faster than the fastest broadband connection in the United States. By 2006 they should be able to transfer data at up to twenty megabytes per second (enough to download movies to watch on high-definition TVs), and by 2010 that rate may be as high as 100 megabytes per second.<sup>164</sup> This has given South Korea the ability to develop such industries as on-demand internet games, television, and movies (began in 2002), as well as wireless internet (began in 2001), well before they become viable in larger markets like the United States, China, Japan, and Europe.<sup>165</sup> Internet gaming has become such a large industry in South Korea that its best players are even achieving superstar and celebrity status.<sup>166</sup>

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<sup>163</sup> H. Asher Bolande, *KT Service Gives Subscribers Access to Video on Demand*, ASIAN WALL ST. J., Oct. 11, 2002, at A3.

<sup>164</sup> See Assif Shameen, *Korea's Broadband Revolution: What Korea Is Doing Will Have Global Impact*, Apr. 2004, vol. 197, at <http://www.chiefexecutive.net/depts/technology/197a.htm> (last visited Mar. 3, 2005). As Lee Jae Woong, CEO of Korea's largest internet portal Daum, stated in 2004: "What Apple's iTunes is doing to music in the U.S. now, broadband did to movies and TV in Korea two years ago." *Id.* Current U.S. broadband rates are between 2 and 4 megabytes per second.

<sup>165</sup> See *id.* (discussing how in 2002 KT Corp., South Korea's largest broadband provider launched a video-on-demand service for subscribers to watch movies and television shows on personal computers or television sets, as well as a special service that relays broadcasts to a normal TV set wirelessly); see also H. Asher Bolande, *Wireless Internet in South Korea Hits Speed Bumps; Lingering Holes in Service Deepen Doubts About 3G; Driving Around Seoul to Test Cdma2000 1x*, ASIAN WALL ST. J., Apr. 22, 2002, at 1 (discussing the 2001 launch of video-on-demand mobile phones via wireless internet).

<sup>166</sup> Mei Fong, *These Star Athletes Put their Talents on Display While Having Quite a Blast: Korean Computer-Game Craze Sparks Pro Circuit, Need for Finger Insurance*, ASIAN WALL ST. J., May 21, 2004, at A1 (discussing how the industry began when the nation rolled out high speed Internet access five years ago, now three Korean cable channels broadcast matches twenty-four hours a day and many young people are attempting to make a living as professional gamers).

## VI. CONCLUSION

This article delineates many of the legal and cultural hurdles associated with technological entrepreneurship in East Asia. With knowledge of the risks, practitioners can better plan and account for them. While the intellectual property laws of China, Taiwan, Japan, and South Korea are all theoretically adequate to provide protection for the inventions and software of technology companies, enforcement remains a practical problem (with the possible exception of Japan). A shift in cultural mentality, both by the government and the infringers, seems to be the only way to bring about change, and that could take some time. Companies that will suffer most from this lack of enforcement will be smaller-sized software ventures that cannot afford to lose revenue opportunities. However, the general industry suffers as well, as the prospect of losing revenue due to infringement creates a disincentive for local companies to invent new products and for foreign companies to cater to these local markets.

As for litigating intellectual property and patent claims, countries will likely continue to interpret laws and support policies that favor domestic companies. The most powerful of them (China) can afford to do so, even at the risk of alienating some investors, knowing that other investors will take their place. As an investor, it would be wise to carefully consider valuations of technology-oriented companies that center their business plans in this region. If a company is in biotechnology or pharmaceuticals (or a similar field where patent protection is key), research into the case law of each country may be necessary for determining risk.

Exit opportunities are also somewhat unpredictable in these countries. None of them has stock markets that match the sophistication or experience of the U.S. stock markets. Moreover, the culture in South Korea and Japan is risk-averse and investors prefer predictability, so even the most successful young companies could still take up to ten years to achieve an IPO. This is much longer than most venture capitalists would be willing to wait to recoup an investment. The culture in China is more supportive of risk and may allow for quicker exit strategies. However, other hidden risks abound in this very large and complex nation.

For entrepreneurs, problems create opportunities. South Korea's foray into the internet gaming and video-on-demand markets appears to be a means of avoiding some of the counterfeiting and piracy issues facing software distributors. The protective methods developed and used in online gaming may soon be extended to other areas and countries to help prevent software theft. As other countries are able to create an infrastructure which makes widespread broadband internet connections possible, the impact of software piracy may then become greatly reduced. This, in turn, could have a profoundly positive effect on technology-oriented entrepreneurship in the region.